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UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/629,033	07/28/2003	Robert N. Mayo	200208396	7375

		EXAMINER
22879 7590 03/26/2007		
HEWLETT PACKARD COMPANY		WAI, ERIC CHARLES
P O BOX 272400, 3404 E. HARMONY ROAD		

INTELLECTUAL PROPERTY ADMINISTRATION	ART UNIT	PAPER NUMBER
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SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/26/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>28 July 2003</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-18</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-18</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>28 July 2003</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   Claims 1-18 are presented for examination.

Double Patenting

2.   The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees.   A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).
        A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.
        Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3.   Claims 1-2, and 10-11 are provisionally rejected on the ground of nonstatutory

obviousness-type double patenting as being unpatentable over claims 1-6, and 12-16 of

copending Application No. 10/436,849. Although the conflicting claims are not identical,

they are not patentably distinct from each other. The examiner can ascertain no

difference between the claims of the present application and copending Application No.

10/436,849. For example, claim 1 of the present application claims a transaction

analyzer that indicates which access subsystem is to be used for the incoming
transaction based on a priority metric. Claim 1 of copending Application No. 10/436,849,
claims a request redirector that distributes an access request in response to a priority.

This is a <u>provisional</u> obviousness-type double patenting rejection because the
conflicting claims have not in fact been patented.

4.   Claims 1-2, 4-5, 10-11 and 13-14, are provisionally rejected on the ground of
nonstatutory obviousness-type double patenting as being unpatentable over claims 1-9,
15-24, and 30 of copending Application No. 10/629,040. Although the conflicting claims
are not identical, they are not patentably distinct from each other. The examiner can
ascertain no difference between the claims of the present application and copending
Application No. 10/629,040. For example, claims 1-2, 4-5, 10-11 and 13-14 claim a
transaction analyzer that uses frequency, cost and computational complexity to
determine a priority metric. Copending Application No. 10/629,040 makes claim to a
transaction director that utilized information associated with a frequency, cost, and
computational intensity.

This is a <u>provisional</u> obviousness-type double patenting rejection because the
conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 101

5.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-9 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The current focus of the Patent Office in regard to statutory inventions under 35 U.S.C. § 101 for method claims and claims that recite a judicial exception (software) is that the claimed invention recite a practical application. Practical application can be provided by a physical transformation or a useful, concrete and tangible result. No physical transformation is recited and additionally, the final result of the claim is determining a priority metric, which is not a tangible result because no action is performed, based on the determination. The following link on the World Wide Web is for the United States Patent And Trademark Office (USPTO) policy on 35 U.S.C. §101.

<http://www.uspto.gov/web/offices/pac/dapp/opla/preognotice/guidelines101_200 51026.pdf>

Claim Rejections - 35 USC § 112

6.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7.   Claims 1-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a.   The following terms are not clearly understood:

i.   Claim 1 recites, "the priority metric indicates which of the access subsystems is to be used". It is unclear how the priority metric determines which subsystem is to be selected (i.e. does the metric specify the subsystem to use? Is a certain priority range mapped to each subsystem?).

ii.   Claim 2 recites, "determines the priority metric by determining a frequency of occurrence for the incoming access transaction". It is unclear how the priority is determined based on the frequency (i.e. higher frequency equals a higher priority?).

iii.   Claim 3 recites, "determines the priority metric by determining a frequency of access of a database table reference in the incoming access transaction". It is unclear how the priority is determined based on the frequency (i.e. higher frequency equals a higher priority?).

iv.   Claim 4 recites, "determines the priority metric by determining a dollar cost associated with the incoming access transaction". It is unclear how the priority is determined based on the cost (i.e. greater cost equals a higher priority?).

v.   Claim 5 recites, "determines the priority metric by determining a computational complexity associated with performing the incoming access transaction". It is unclear how the priority is determined based on the complexity (i.e. greater complexity equals a higher priority?).

      vi.   Claim 8 recites, "determines the priority metric in response to a set

of query constraints contained in the incoming access transaction". It is

unclear how the priority is determined based on the set of query ,

constraints (i.e. greater number of constraints equals a higher priority?).

      vii.   Claim 9 recites, "the priority metric is based on a size of a database

table". It is unclear how the priority is determined based on size of the

table (i.e. larger table size equals a higher priority?).

      viii.   Claims 10-14, and 17-18 are rejected for the same reasons as

claims 1-5, and 8-9 above.

    b.   The following claim terms lack antecedent basis:

      ix.   Claim 18 claims the information system of claim 17, while claim 17

is a method. For purposes of examination, claim 18 will be interpreted to

claim a method.

Claim Rejections - 35 USC § 103

8.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

9.   Claims 1, 4-7, 10, and 13-16 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Coates et al. (US Pat No. 6,952,737 hereinafter Coates) in view of

Shaw et al. (US Pat No. 5,745,758 hereinafter Shaw).

10.   Regarding claim 1, Coates teaches an information system, comprising:

        a set of access subsystems each for use in accessing a persistent store in the

information system (col 7 lines 6-17, wherein the load balancing fabric 310 distributes

upload and download requests to one of a plurality of DOSMs based on DOSM

availability, and wherein the DOSM are access nodes);

        transaction analyzer that determines a priority metric for an incoming access

transaction to the persistent store (col 7 lines 6-17, wherein the load balancing fabric is

capable of effectively prioritizing TCP and UDP traffic).

11.   Coates fails to teach that the priority metric indicates which of the access

subsystems is to be used when performing the incoming access transaction. Shaw

teaches a distribution means of assigning each transaction into a channel where each

channel has different attributes of priority, speed, or bandwidth; where the distribution is

based on the individual priority (col 35 lines 11-20).

12.   It would have been obvious to one of ordinary skill in the art at the time of the

invention to include distributing each transaction according to its priority to different

access subsystems that are ranked according to their capabilities. One would be .

motivated by the desire to increase the throughput of Coates's system by distributing

packets to the resources that could process the transaction in a timely fashion indicative of it's priority.

13.   Regarding claims 4-5, Coates and Shaw do not teach that the transaction analyzer determines the priority metric by determining a dollar cost associated with the incoming access transaction (claim 4) or a computational complexity associated with performing the incoming access transaction (claim 5).

14.   However, it would have been obvious to one of ordinary skill in the art at the time of the invention to determine the priority metric by determining a dollar cost or computational complexity. As is well known in the art, greater computational complexity equates with a higher dollar cost. One would be motivated by the desire to maximize greatest return on investment by giving priority to requests that return the most profit.

15.   Regarding claims 6-7, Coates and Shaw do not teach that the computational complexity is indicated by a number of database tables in the persistent store that are referenced by the incoming access transaction or that the computational complexity is indicated by a number of field matches specified in the incoming access transaction to database tables in the persistent store.

16.   However, it is well known in the art that accessing a greater number of database tables of fields is a more computationally complex process.

17.   Regarding claims 10, and 13-16, they are the method claims of claims 1, and 4-7 above. Therefore, they are rejected for the same reasons as claims 1, and 4-7 above.

18.   Claims 2-3 and 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Coates et al. (US Pat No. 6,952,737) and Shaw et al. (US Pat No. 5,745,758), further in view of Yu (US Pat No. 6,807,572).

19.   Regarding claims 2-3, Coates and Shaw do not teach that the transaction analyzer determines the priority metric by determining a frequency of occurrence for the incoming access transaction (claim 2) or a frequency of access of a database table referenced in the incoming access transaction (claim 3).

20.   Yu teaches that depending on the frequencies of requests, and the load of other, more frequent queries, the application server will choose to give priority to other queries first (col 2 lines 50-54.

21.   It would have been obvious to one of ordinary skill in the art at the time of the invention to include determining the priority metric based on a frequency. One would be motivated by the desire to increase flexibility and scalability to serve potentially a large number of clients during run time (col 2 lines 54-56).

22.   Regarding claims 11-12, they are the method claims of claims 2-3 above. Therefore, they are rejected for the same reasons as claims 2-3 above.

23.   Claims 8-9 and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Coates et al. (US Pat No. 6,952,737) and Shaw et al. (US Pat No. 5,745,758),

further in view of Stefanescu et al. (US Pub No. US 2003/0013951 A1 hereinafter

Stefanescu).

24.   Regarding claims 8-9, Coates and Shaw do not teach that the transaction

analyzer determines the priority metric in response to a set of query constraints

contained in the incoming access transaction (claim 8) or that the priority metric is

based on a size of a database table in the persistent store to which the query

constraints are to be applied (claim 9).

        Stefanescu teaches prioritizing queues based on the supplied constraints to

organize the data in a system with finite resources ([0107] lines 5-12). By interleaving

the requests, processing can occur as soon as possible on systems where the amount

of data to be transmitted is limited.

        It would have been obvious to one of ordinary skill in the art at the time of the

invention to include determining a priority metric in response to the size of the database

table. One would be motivated by the desire to allow processing to being as soon as

possible in order to meet SLA requirements ([0107] lines 10-16).

25.   Regarding claims 17-18, they are the method claims of claims 8-9 above.

Therefore, they are rejected for the same reasons as claims 8-9 above.

Conclusion

26.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Eric C. Wai whose telephone number is 571-270-1012.

The examiner can normally be reached on Mon-Thurs, 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Meng - Ai An can be reached on 571-272-3756. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

EW

MENG-AI T. AN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100